

CH2M HILL Hanford Group, Inc.	Manual	ESHQ
PERSONAL PROTECTIVE EQUIPMENT	Document	TFC-ESHQ-S_IS-C-02, REV A-1
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	Issue Date	August 23, 2002
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1.0 PURPOSE AND SCOPE

(7.1.1.a, 7.1.1.b, 7.1.1.c, 7.1.1.d, 7.1.1.e, 7.1.2.a, 7.1.2.b, 7.1.2.c, 7.1.2.d, 7.1.2.e)

This procedure establishes the process for identifying, prescribing and maintaining personal protective equipment (PPE) to protect employees and visitors from injury due to absorption or physical contact hazards commonly associated with process or environment relating to the following body areas: eye and face, head, foot, hand, and general clothing.

This program applies to all Tank Farm Contractor activities where PPE may be required. The following requirement areas are not within the scope of this procedure (see referenced sections):

- Respiratory Protection (HNF-IP-0842, [Volume 9, Section 4.2](#))
- Electrical Protective Devices (HNF-IP-0842, [Volume 9, Section 4.28](#))
- Fall -Protection (HNF-IP-0842, [Volume 9, Section 4.29](#))
- Hearing Protection (HNF-IP-0842, [Volume 9, Section 4.7](#))
- Area Posting (HNF-IP-0842, [Volume 9, Section 4.13](#)) and
- Specialized activities involving radiation and chemical contamination, or emergency activities
- Process for identifying hazards and documenting the controls ([TFC-ESHQ-S SAF-C-02](#))
- Process for communicating hazards and controls (HNF-IP-0842, [Volume 5, Section 4.1](#)).

2.0 IMPLEMENTATION

This procedure will be effective on September 30, 2002. ~~The delay allows Operations areas to notify and come into compliance with the new definition of “substantial footwear” (see Section 5.0).~~

3.0 RESPONSIBILITIES

3.1 Managers/Supervisors

1. Ensure a means for eliminating or controlling hazards are sought through process/material substitution, engineering, or administrative actions (in that order of preference) prior to relying on the use of PPE as the protective method.
2. Ensure new and reusable PPE is maintained in clean and sanitary condition and stored in such a manner as to provide protection from damage and accumulation of dust, dirt, and insect infestation.

3.2 Employees

Dress for the nature of the work assignments, exposure to the general work environment, and expected climate conditions. The following minimum dress requirements are established, with

the understanding that PPE requirements in Job Hazards Analyses take precedence over these requirements:

1. Office/administrative work (regardless of location): Dress appropriate for the work activity and environmental conditions; no specific safety requirements.

NOTE: Performing maintenance activities or material handling activities are not administrative activities, even when performed in office buildings. PPE appropriate for these activities shall be worn as specified in work instructions or general Job Hazard Analysis.

2. Tank farms and maintenance shops and equivalent areas where operations and/or maintenance work is being performed: Short sleeve shirt, long pants, substantial footwear and safety glasses with side shields. In addition, long hair and loose fitting clothing shall be restrained around moving machinery.

NOTE: Contact lenses may be worn but are not a substitute for eye protective devices.

NOTE: Depending upon job assignment and work conditions, wearing rings or watches may be prohibited. Jewelry can catch and cause injuries when climbing, handling materials, or working with machinery

3. Designated construction areas: Same as tank farms and maintenance shops with the exception that athletic footwear is not allowed.

4. Designated work areas where cranes are operating: Same as tank farms and maintenance shops with the exception that protective footwear (steel or hard-toe shoes or boots) and hard hats are required. Other PPE, such as hearing protection, is also required in close proximity to the crane and as specified in work control documents.

4.0 PROCEDURE

Safety and Health
Professional

1. Select PPE in accordance with the requirements listed in Section 7.0 and the guidance contained in [Attachment A](#).

NOTE: The selected PPE is documented in [TFC-ESHQ-S SAF-C-02](#).

Managers/
Supervisors

2. Provide the prescribed PPE.
3. Communicate to the workers the PPE prescribed and its purpose.

NOTE: The process for communicating hazards and controls to the worker is described in HNF-IP-0842, [Volume 5, Section 4.1](#).

4. Ensure each employee who uses PPE is provided training that covers the criteria specified in [Attachment B](#).

Employee

5. Receive/obtain PPE prescribed for a given work activity.
6. Inspect prescribed PPE for defects/damage that would compromise its function.

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| | 7. Ensure that defective/damaged PPE is immediately removed from service and reported for repair or replacement. |
| | 8. Obtain new PPE as necessary and repeat Section 4.0, steps 5 and 6. |
| Managers/
Supervisors | 9. Ensure the disposal or repair of PPE identified in Section 4.0, step 7. |
| | 10. Ensure that any employee-owned PPE provides adequate protection for the task(s) being performed and is properly maintained. |
| Employee | 11. Wear PPE as required for protection against identified exposures. |
| Managers/
Supervisors | 12. Ensure that dress requirements and prescribed PPE is worn as required. |
| | 13. Ensure prescribed PPE is reassessed for applicability: <ul style="list-style-type: none"> • If the hazards of a particular work activity changes (e.g., new process/equipment introduced, change in hazardous material usage) • If trend analysis identifies a pattern in PPE related accidents. |
| | 14. Provide employee re-training: <ul style="list-style-type: none"> • When there is a change in work function/task that renders the initial training obsolete • When there are changes introduced in the type of PPE to be used • When employee proficiency appears to be diminishing. |

5.0 DEFINITIONS

Hazardous conditions. Consists of the following: motion capable of causing impact, injury, or entanglement, high temperatures, chemicals, light radiation, falling or rolling/pinching objects, sharp objects, flying particles/dust, electrical hazards, and co-located work activity.

Personal Protective Equipment. Types of PPE are defined in [Attachment A](#).

6.0 RECORDS

No records are generated in the performance of this procedure.

7.0 SOURCES

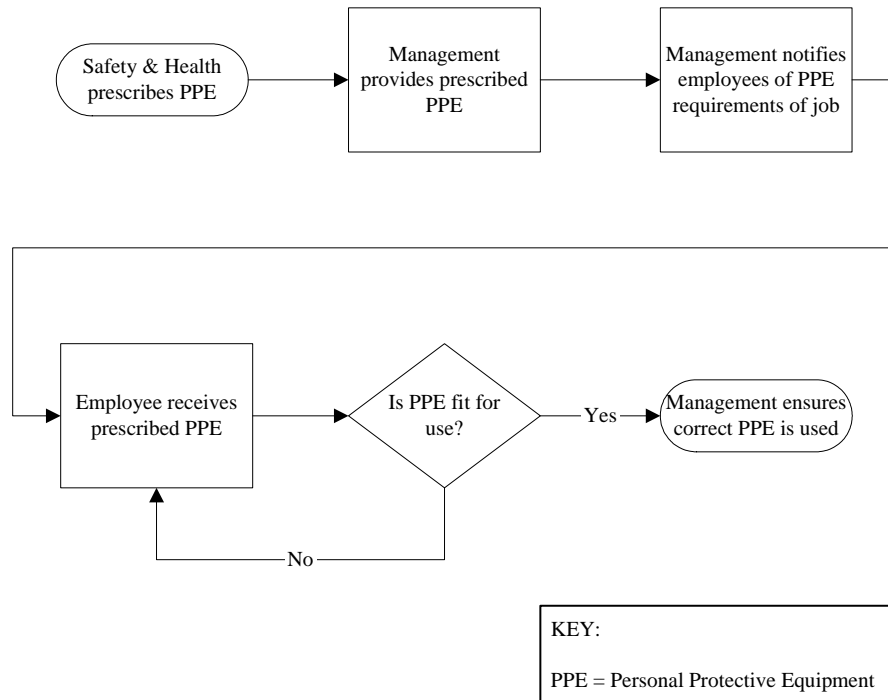
7.1 Requirements

1. 29 CFR 1910, Subpart I, "Personal Protective Equipment." (S/RID)
 - a. 1910.132, "General requirements."
 - b. 1910.133, "Eye and face protection."
 - c. 1910.135, "Head protection."
 - d. 1910.136, "Foot protection."
 - e. 1910.138, "Hand protection."
2. 29 CFR 1926, Subpart E, "Personal Protective and Life Saving Equipment." (S/RID)
 - a. 1926.95, "Criteria for personal protective equipment."
 - b. 1926.96, "Occupational foot protection."
 - c. 1926.100, "Head protection."
 - d. 1926.102, "Eye and face protection."
 - e. 1926.107, "Definitions applicable to this subpart."

7.2 References

1. ANSI Z41, "Personal Protection - Protective Footwear."
2. ANSI Z87.1, "Practice For Occupational and Educational Eye and Face Protection."
3. ANSI Z89.1, "Safety Requirements For Industrial Head Protection."
4. HNF-IP-0842, RPP Administration.
 - [Volume 1, Section 2.11](#), "Technical Procedure Control and Use."
 - [Volume 5, Section 4.1](#), "Pre-Job Briefing."
5. [TFC-ESHQ-S SAF-C-02](#), "Job Hazard Analysis."
6. [TFC-OPS-MAINT-C-01](#), "Tank Farm Contractor Work Control."

Figure 1. PPE Process.



ATTACHMENT A - PPE SELECTION CRITERIA AND GUIDANCE

1.0 GENERAL

1.1 Hazardous Condition Assessment

Hazard conditions requiring PPE are categorized below by area of body protected. This information is to serve as general guidance as to the hazard assessed. The Safety professional will make final decisions as to the appropriateness of PPE for a given situation.

1.2 General Selection Criteria

All PPE is to be selected based on the following requirements:

- To be based on anticipated hazard
- To be safe in design and construction
- To properly fit each affected employee
- Not to be modified from original manufactured condition
- To be ANSI-approved (required where applicable). Examples of these are safety eyewear and safety shoes. Approval can be verified by a distinct code mark or etching on the item in question.

2.0 EYE/FACE PROTECTION

2.1 Hazardous Condition

Protection is required where there is a potential for injury from flying particles, molten metal, liquid chemicals, acid or caustic liquids, chemical gases or vapors, potentially injurious light radiation, or a combination of these.

- For performance of chipping or grinding, face shields are to be worn.

2.2 Selection/Use Criteria

Protection will conform to specifications of ANSI Z87.1, and all safety glasses will be fitted with side shields.

3.0 HEAD PROTECTION

3.1 Hazardous Condition

Protection is required where there is a potential danger of head injury due to the hazards of falling or flying objects, electrical shock, or burns.

ATTACHMENT A - PPE SELECTION CRITERIA AND GUIDANCE (Cont.)

3.2 Selection/Use Criteria

- Shall conform to the specifications of ANSI Z89.1 and be nonconductive
- Shall be worn only as designed, (e.g., do not wear backwards unless certified by the manufacturer to be worn in this manner)
- Shall not be painted.

4.0 HAND PROTECTION

4.1 Hazardous Condition

Protection is required where there is a potential for hand injury due to exposure to such hazards as: skin absorption of harmful substances, severe cuts or lacerations, severe abrasions, punctures, chemical burns, thermal burns, or harmful temperature extremes.

4.2 Selection Criteria

Selected based on published product performance characteristics, degree of dexterity required to perform the work/task, and the appropriate application for protection against the hazard(s) identified.

5.0 FOOT PROTECTION

5.1 General Footwear

5.1.1 Hazardous Condition

For work environments with little to no specific foot hazards (e.g. office/administrative) general footwear (street shoes) is acceptable.

5.1.2 Selection Criteria

General footwear is not intended to meet specific safety requirements; however, this footwear should be selected with an appreciation for the nature and environment of the work activity.

5.2 Substantial Footwear

5.2.1 Hazardous Condition

Substantial footwear is to be worn in all non-office/administrative work areas (e.g., tank farms, maintenance shops) where protective footwear is not required.

ATTACHMENT A - PPE SELECTION CRITERIA AND GUIDANCE (Cont.)

5.2.2 Selection Criteria

Substantial footwear is footwear (shoe or boot) made from leather or equally firm material. It excludes high heels, open toes, canvas or cloth shoes, and sandals. Additionally, in designated construction areas athletic shoes are also excluded from this definition.

5.3 Protective Footwear

5.3.1 Hazardous Condition

Where there is a clear danger of foot injury, such as moving heavy material, falling/ rolling objects, or objects piercing the sole, protective footwear shall be required.

5.3.2 Selection Criteria

Protective footwear (e.g., safety shoes with steel or hard toes) shall conform to the specifications of ANSI Z41 - 1999

5.4 Chemical Protection

5.5 Hazardous Condition

For work areas where there is a hazard of chemical exposure and injury to the feet appropriate chemical protection shall be required.

5.6 Selection Criteria

Chemical protection may be accomplished either with specific footwear or with protective materials donned over existing footwear. Selection will be based on published product performance characteristics, degree of mobility required to perform the work/task, and the appropriate application for protection against the hazard(s) identified.

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ATTACHMENT B - PPE TRAINING CRITERIA

Content will include at least the following:

- The necessity of the personal protective equipment
- The identification of the required personal protective equipment to be worn
- The correct ways to don, doff, adjust, and wear the personal protective equipment
- The limitations of the personal protective equipment
- The proper care, use, inspection/maintenance, life span, and disposal of the personal protective equipment.